

Application Number 10/731,868

Amendment in response to Final Office Action mailed April 17, 2008

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**AMENDMENTS TO THE CLAIMS**

This listing of claims will replace all prior versions and listings of claims in the application.

**Listing of Claims:**

Claim 1 (Currently Amended): A method comprising:

making an incision in a scalp of a head of a patient to create a scalp flap;

separating the scalp flap from a skull of the patient, wherein the separated scalp flap is attached to the remainder of the scalp by a fold;

after separating the scalp flap from the skull, separating a portion of the remainder of the scalp adjacent to the fold from the skull to create a pocket adjacent to the fold and between the scalp and the skull; and

placing at least a portion ~~majority~~ of a low-profile implantable medical device in the pocket adjacent to the fold and underneath the scalp;

drilling one or more burr holes in a portion of the skull of the patient exposed by separating the scalp flap from the skull; and

inserting one or more leads through the burr holes and into a brain of the patient.

Claim 2 (Original): The method of claim 1, wherein the low-profile implantable medical device comprises:

a first module that includes control electronics within a first housing;

a second module that includes a second housing; and

a flexible overmold that at least partially covers the first and second housings.

Claim 3 (Original): The method of claim 1, wherein the low-profile implantable medical device has a maximum thickness of between approximately 4 millimeters and approximately 8 millimeters.

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Claim 4 (Original): The method of claim 1, wherein the low-profile implantable medical device has a maximum thickness of approximately 6 millimeters.

Claim 5 (Original): The method of claim 1, wherein the low-profile implantable medical device has a periphery and wherein the angle between the periphery and the skull is greater than ninety degrees.

Claim 6 (Original): The method of claim 5, wherein the angle is approximately 135 degrees.

Claim 7 (Currently Amended): The method of claim 1, further comprising connecting ~~a~~ the one or more leads to the low-profile implantable medical device.

Claim 8 (Canceled).

Claim 9 (Original): The method of claim 1, further comprising anchoring the low-profile implantable medical device to the skull.

Claim 10 (Original): The method of claim 9, wherein anchoring the low-profile implantable medical device to the skull comprises anchoring the low-profile implantable medical device to the skull with a bone screw.

Claim 11 (Currently Amended): The method of claim 1, further comprising:  
covering at least a an exposed portion of the low-profile implantable medical device with the scalp flap; and  
suturing the scalp flap to close the incision.

Claim 12 (Previously Presented): The method of claim 1, further comprising:  
creating a recess in the skull; and  
placing the low-profile implantable medical device in the recess.

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**Claim 13 (Withdrawn):** The method of claim 1, further comprising:  
creating a second pocket between the scalp and the skull; and  
placing at least a portion of a low-profile implantable medical device in the second pocket.

**Claim 14 (Withdrawn):** The method of claim 13, wherein the low-profile implantable medical device comprises:  
a first module within a first housing;  
a flexible overmold that at least partially covers the first housings;  
a second module that includes a second housing; and  
a flexible tether member that couples the second module to the first module,  
wherein placing at least a portion of a low-profile implantable medical device in the second pocket comprises placing at least a portion of the second module in the second pocket.

**Claim 15 (Original):** The method of claim 1, wherein the low-profile implantable medical device is contoured in three dimensions to substantially conform to the shape of a skull.

**Claim 16 (Original):** The method of claim 1, further comprising adjusting the low-profile implantable medical device to cause a contour of the low-profile implantable medical device to more closely match a contour of the skull.

**Claim 17 (Original):** The method of claim 1, further comprising administering a local anesthetic to the patient prior to making the incision.

**Claims 18-23 (Canceled).**

**Claim 24 (Previously Presented):** The method of claim 1, wherein the incision is made in a top of the head of the patient.

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Claim 25 (Currently Amended): The method of claim 1, wherein placing ~~the majority of~~ at least a portion of the low-profile implantable medical device in the pocket comprises placing all of the low-profile implantable medical device in the pocket.

Claim 26 (Currently Amended): A method comprising:

- making an incision in a scalp at a top of a head of a patient to create a scalp flap at the top of the head of the patient;
- separating the scalp flap from a skull of the patient, wherein the separated scalp flap is attached to the remainder of the scalp by a fold;
- after separating the scalp flap from the skull, separating a portion of the remainder of the scalp adjacent to the fold from the skull to create a pocket adjacent to the fold and between the scalp and the skull; and
- placing at least a portion ~~all~~ of a low-profile implantable medical device in the pocket adjacent to the fold and underneath the scalp;
- drilling one or more burr holes in a portion of the skull of the patient exposed by separating the scalp flap from the skull;
- inserting one or more leads through the burr holes and into a brain of the patient;
- connecting the one or more leads to the low-profile implantable medical device;
- covering the low-profile implantable medical device, leads and burr holes with the scalp flap; and
- closing the incision.

Claim 27 (Previously Presented): The method of claim 26, further comprising:

- creating a recess in the skull; and
- placing the low-profile implantable medical device within the recess.

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**Claim 28 (Previously Presented):** A method comprising:

making an incision in a scalp at a top of a head of a patient to create a scalp flap at the top of the head of the patient;

separating the scalp flap from a skull of the patient, wherein the separated scalp flap is attached to the remainder of the scalp by a fold;

after separating the scalp flap from the skull, separating a portion of the remainder of the scalp adjacent to the fold from the skull to create a pocket adjacent to the fold and between the scalp and the skull; and

placing at least a portion of a low-profile implantable medical device in the pocket adjacent to the fold and underneath the scalp.

**Claim 29 (Previously Presented):** The method of claim 28, wherein placing the portion of the low-profile implantable medical device in the pocket adjacent to the fold and underneath the scalp comprises placing all of the low-profile implantable medical device in the pocket adjacent to the fold and underneath the scalp.

**Claim 30 (Previously Presented):** The method of claim 1, wherein the low-profile implantable medical device is a neurostimulator that provides deep brain stimulation.

**Claim 31 (Previously Presented):** The method of claim 1, wherein the incision is a C-flap incision.

**Claim 32 (New):** The method of claim 28, wherein the low-profile implantable medical device is a neurostimulator that provides deep brain stimulation.